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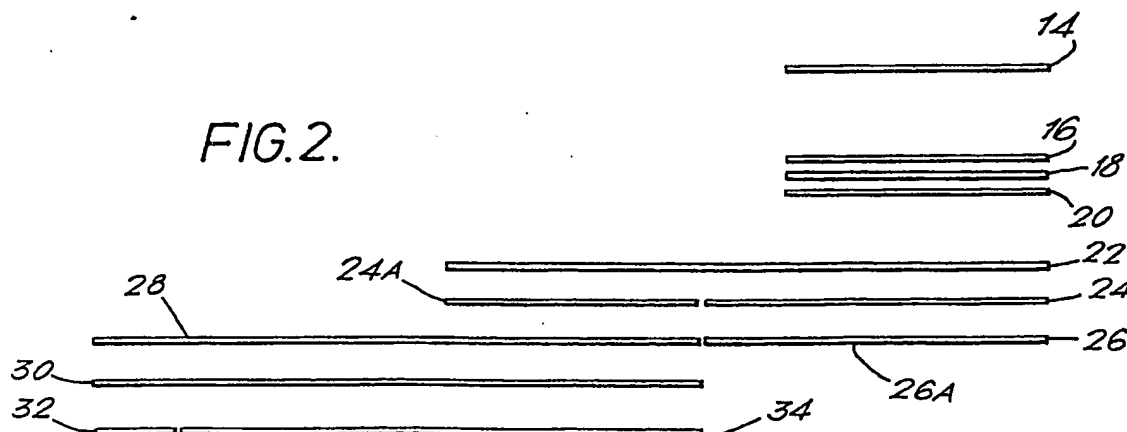
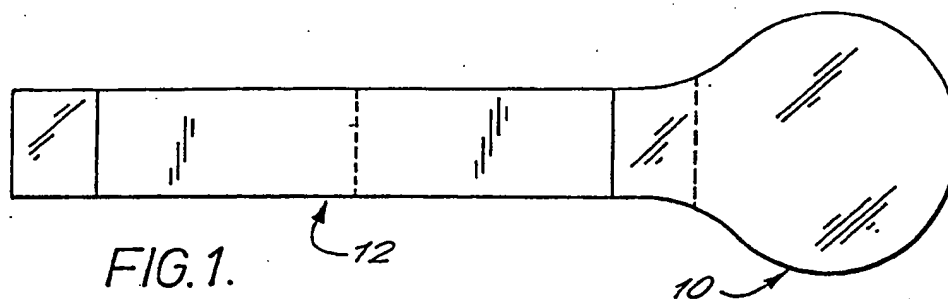
(52) UK CL (Edition K)  
A5R RGA

(56) Documents cited  
WO 90/02578 A US 4726716 A US 3677250 A

(58) Field of search  
UK CL (Edition K) A5R RGA  
INT CL<sup>5</sup> A61M 25/02

(54) Nasogastric/nasotracheal tube holder

(57) The holder has a first flat portion 10 having a first adhesive surface 16 by which it can be attached to the face of a wearer, said surface being covered by a removable protective release paper or film 14. The first portion is joined to an elongate second portion 12 which has a length of over twice the maximum dimension of the first portion and a width not more than that of the first portion. The second portion has a first adhesive-free surface region adjacent to the first portion and a second surface region, on the same side of the second portion as the first region, which is coated with or carries adhesive 30 and can be folded over in use to hold a tube in position in a nostril. A gripping tab 32 may be provided at the distal end of the second portion.



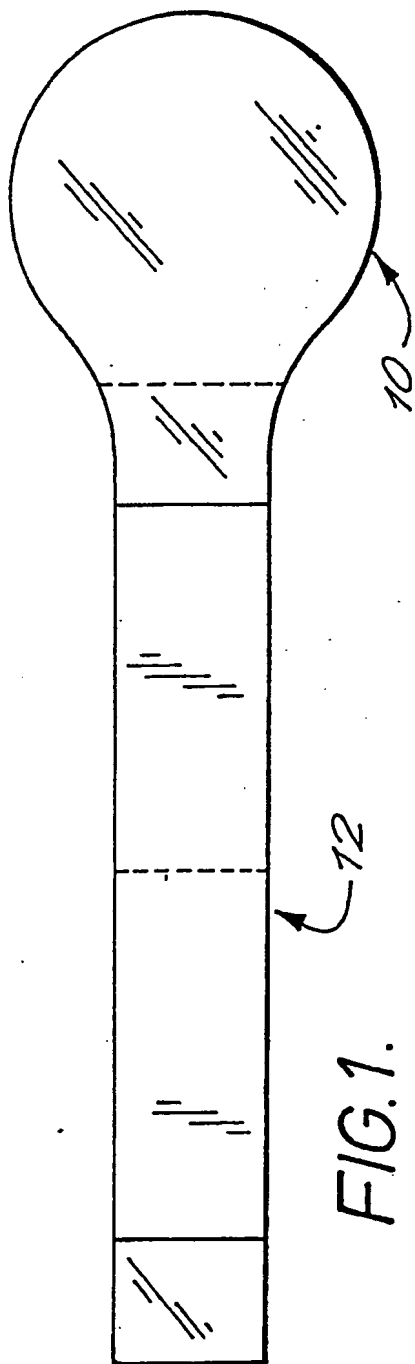


FIG. 1.

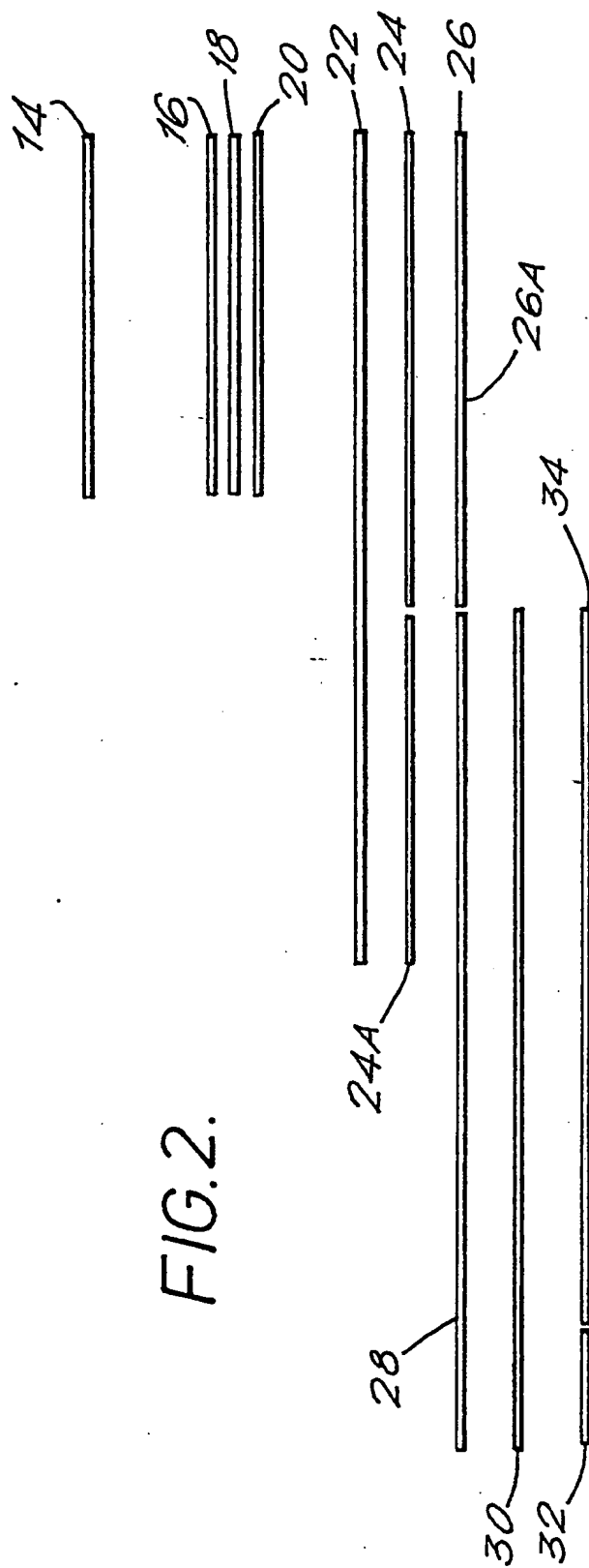


FIG. 2.

FIG. 3A.

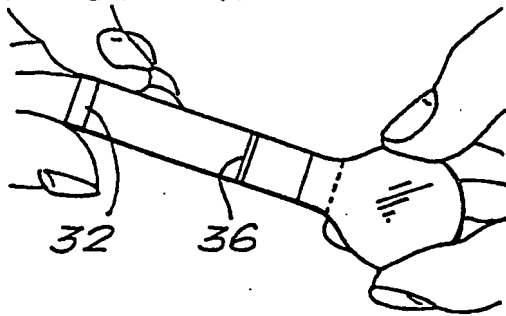


FIG. 3D.

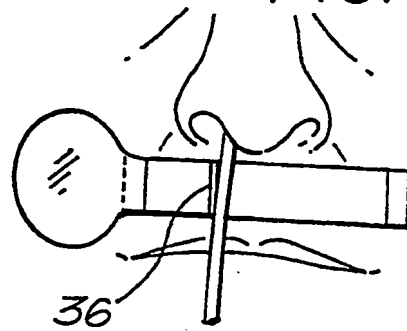


FIG. 3B.

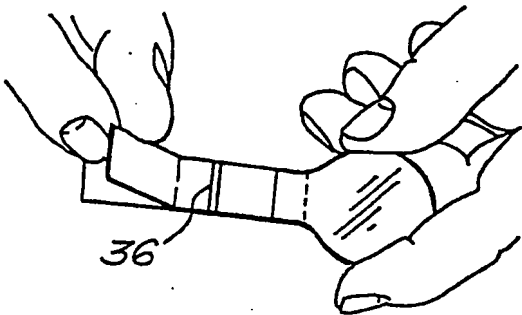


FIG. 3E.

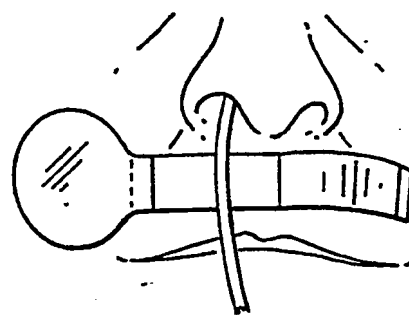


FIG. 3C.

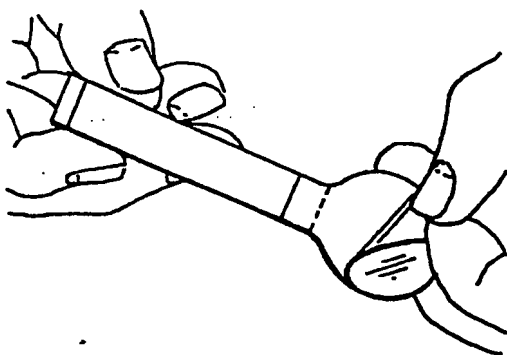


FIG. 3F.

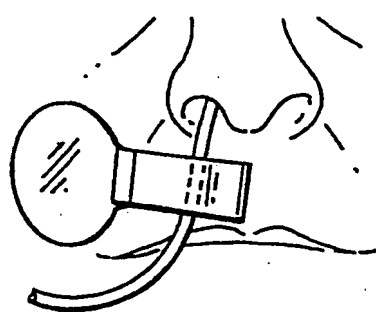
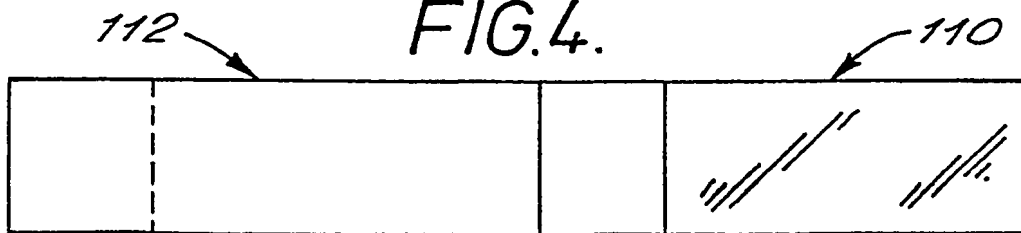


FIG. 4.



TUBE HOLDER

This invention relates to a holder for a nasogastric or nasotracheal tube.

One design of nasogastric tube holder is disclosed in U.S. Patent No. 4 932 943. One problem with this design is that it is either unusable by, or extremely uncomfortable for, persons having copious facial hair. In addition, the large area of adhesive pad which covers the nose can be regarded as unsightly. Proposals have been made in numerous documents for holders for tubes such as catheter tubes, see for example the following patent documents:-

EP 206 558A	U.S. 4,534,762
U.S. 4,460,356	U.S. 4,333,468
U.K. 2 191 407A	U.K. 2 211 417A
U.S. 4 738 662	U.S. 3 826 254
U.S. 3 977 407	PCT WO86 06640

However, none of these proposals provides a fully effective, comfortable and easily-applied nasogastric tube holder.

According to the present invention, there is provided a nasogastric or nasotracheal tube holder comprising a first substantially flat portion having a first adhesive surface by which it can be attached to the face of a wearer, the first surface being covered by a removable protective release paper or film or the like, the first portion being joined to an elongate substantially flat second portion which has a length of over twice the maximum dimension of the first portion and a width not more than that of the first portion, the second portion having a first surface region adjacent to the first portion and uncoated with adhesive, and a second surface region, on the same side of the second portion as the first region, which is coated with or carries adhesive and can be folded over in use to hold a tube in position in a nostril.

The said first portion is preferably substantially circular as hereinafter defined. It may alternatively be substantially square or rectangular, provided that the ratio between the major and minor sides of the rectangle is less than about 1.75:1.

In this specification, the term "substantially circular" as applied to the first portion is to be interpreted as including shapes which approximate to a circle, e.g. many-sided polygons, particularly regular polygons, elliptical shapes

wherein the ratio of the major and minor axes is less than about 1.75:1, and other oval shapes which approximate to such ellipses.

The first portion is preferably designed to be wider than the elongate second portion firstly to provide an effective adhesive area by which it can be attached to the face, secondly so that it can be more readily manipulated in the attachment procedure, and thirdly so that when attached its area is sufficient to give a firm and durable attachment.

The elongate second portion is preferably narrower than the first portion so that it provides minimal obstruction in the nose region while satisfactorily holding the tube in position.

In a preferred embodiment of the invention, the distal end of the second portion has a gripping tab attached thereto, adjacent to its adhesive area.

The invention will be better understood from the following non-limiting description of examples thereof given with reference to the accompanying drawings in which:-

Figure 1 is a plan view of one embodiment of nasogastric tube holder according to the invention;

Figure 2 is an exploded side view of the holder of Figure 1 showing the manner of assembly of the holder of Figure 1;

Figures 3A-3F show steps in the use of a preferred embodiment of nasogastric tube holder of Figures 1 and 2; and

Figure 4 is a plan view of a second embodiment of the invention.

The nasogastric or nasotracheal tube holder illustrated in Figures 1-3 includes a first portion generally indicated 10 and a second portion generally indicated 12. The first portion 10 is generally circular, and merges with and is joined to an elongate second portion 12. The first portion 10 is made up of a number of layers as seen best in Figure 2, that is to say there is a layer of release paper or film or like material 14 adjacent a layer 16 of adhesive which is applied to a plastics sheet which may for example be a closed cell polyethylene sheet 18. On the opposite side of this sheet 18 is a further layer of adhesive 20. The adhesive 20 serves to connect the sheet 18 in face-to-face relation to a plastics film 22 which may for example be PVC film of about 0.12

inch (about 3 mm) in thickness. This film 22 is part of both the first and second portions 10, 12 and serves to connect these portions together. A layer of adhesive 24 on the film 22 attaches a further covering plastics film 26 to the film 22. The film 26 is preferably a colour which merges harmoniously with skin colour, but of course may be any desired colour.

The second portion 12 of the illustrated nasogastric tube holder includes an adhesive layer 24A attached to one side of the film 22, and serving to connect it to a porous or microporous plastics film such as that known by the designation "Transpor 1527". This film 28 is connected by adhesive 30 to a tab 32 of limited length which may for example be a polyethylene film and preferably is distinctively coloured, for example blue. The remainder of the adhesive 30 is covered by release paper or film 34. In use, the surface of adhesive 16, exposed by removal of the release paper 14, is applied to the skin of the face of the wearer, adjacent to, e.g. about  $1\frac{1}{2}$  inches (about 38 mm) from, the nose with the elongate portion 12 extending laterally across the face beneath the nose. Because of the elongate construction of portion 12, the position of the holder can be adjusted so that the first portion 10 is applied to a skin area that is substantially hair-free.

The use of the illustrated device will be readily understood from a consideration of Figures 3A-3F. After the device has been positioned as described, this positioning being assisted using the marker line 36, seen in Figures 3A and 3B, the release paper 34 is peeled off so exposing an adhesive surface which faces away from the face of the wearer. The tab end of the second portion 12 is then held once the release paper 34 has been removed and this end is folded or bent over to bring the exposed surface of the adhesive 30 into contact with the surface 26A of the film 26. This folding over of the elongate portion around the tube securely anchors the tube in the proper position, and in contrast to prior art constructions, avoids the application of an adhesive strip or plaster to the nose or in close proximity to the nose, thereby yielding a much more comfortable device. The adhesive surface 30 also makes contact with the outside of the tube wall, so holding the tube more effectively than a mere mechanical engagement.

An alternative embodiment of the invention is illustrated in Figure 4. This differs from the Figures 1-3 embodiment merely in that the first portion

110 is rectangular in shape and of the same width as the elongate portion 112. This embodiment of the invention, while it sacrifices some of the security of attachment which is achieved with the Figures 1-3 embodiment, provides a useful and relatively unobtrusive nasogastric tube holder. In the tube holder illustrated in Figure 4, the arrangement of the layers is the same as is shown in Figure 2.

It will be appreciated that modifications can be made without departing from the invention. For example, film other than PVC film could be employed for the film 22, and a plastics sheet other than closed cell polyethylene could be employed for the sheet 18. Any suitable adhesive may be used for the adhesive layers 16, 20 and 24.

CLAIMS

1. A nasogastric or nasotracheal tube holder comprising a first substantially flat portion having a first adhesive surface by which it can be attached to the face of a wearer, the first surface being covered by a removable protective release paper or film or the like, the first portion being joined to an elongate substantially flat second portion which has a length of over twice the maximum dimension of the first portion and a width not more than that of the first portion, the second portion having a first surface region adjacent to the first portion and uncoated with adhesive, and a second surface region, on the same side of the second portion as the first region, which is coated with or carries adhesive and can be folded over in use to hold a tube in position in a nostril.
2. A holder according to claim 1 in which the first portion is substantially circular as herein defined.
3. A holder according to claim 1 in which the first portion is a strip-like extension of the second portion.
4. A holder according to any one of claims 1-3 in which there is a gripping tab on the distal end of the second portion.
5. A holder according to any preceding claim bearing a marker line to facilitate positioning the holder on the face in a desired relationship with a nasogastric tube.
6. A nasogastric or nasotracheal tube holder substantially as herein described and illustrated with reference to Figures 1-3 of the accompanying drawings.
7. A nasogastric or nasotracheal tube holder substantially as herein described and illustrated with reference to Figure 4 of the accompanying drawings.



## Relevant Technical fields

(i) UK CI (Edition K ) A5R (RGA)

(ii) Int CI (Edition 5 ) A61M 25/02

## Search Examiner

L V THOMAS

## Databases (see over)

(i) UK Patent Office

(ii)

## Date of Search

13 MARCH 1991

Documents considered relevant following a search in respect of claims

1-7

Category (see over)	Identity of document and relevant passages		Relevant to claim(s)
X	WO-A-90/02578	(ACONVEST AG) See line 10 page 3 to line 1 page 4 and Figures 1 and 2	1
X	US 4726716	(MC GUIRE) See line 44 column 2 - line 16 column 3 and Figures 1-3	1, 3, 7
X	US 3677250	(THOMAS) See lines 13-26 column 3 and figures 5 and 6	1-3, 6

Category	Identity of document and relevant passages	Relevant to claim(s)

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